

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

5 Applicant(s): Perrone et al.
Docket No : YOR920010252US2
Serial No : 10/079,741
Filing Date: February 19, 2002
Group: 2164
10 Examiner: Sathyanarayan R. Pannala

Title: Retrieving Handwritten Documents Using Multiple Document Recognizers and
Techniques Allowing Both Typed and Handwritten Queries

15 PETITION FOR REVIVAL OF AN APPLICATION FOR PATENT
ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b)

20 Mail Stop Petition
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

25 Applicants submitted a Petition to Revive on February 21, 2007 that included a
first petition based on an unavoidable standard and an alternative petition based on an
unintentional standard. A Decision on Petition was mailed on April 12, 2007 indicating that the
first petition was denied but would be treated as a petition to revive under the unintentional
standard. Applicants have not received a decision on this second petition. Thus, Applicants are
30 resubmitting this second petition for consideration. Applicants hereby petition for revival of this
application, the entire delay in filing the required reply from the due date for the required reply
until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional.

APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION.

35 1. Petition fee

There is a fee of \$1,540.00 due in conjunction with the Petition. Please charge **Deposit
Account No. 50-0762** the amount of \$1,540.00 to cover the fee. In the event of non-
payment or improper payment of a required fee, the Commissioner is authorized to
charge or to credit **Deposit Account No. 50-0762** as required to correct the error.

2. Reply and/or fee

The reply and/or fee to the above-noted Notice of Non-Compliant Appeal Brief in the form of an Appeal Brief is enclosed herewith.

5

3. Terminal disclaimer with disclaimer fee

Since this utility/plant application was filed on or after June 8, 1995, no terminal disclaimer is required.

10

4. An adequate showing of the cause of delay, and that the entire delay in filing the required reply from the due date for the reply until the filing of a grantable petition under 37 CFR 1.137(a) was unavoidable, is listed below. The delay was unavoidable because the Notice of Appeal and Pre-Appeal Brief Request for Review was never received by Applicants.

15

Chronology:

02/14/06 Applicants filed an Appeal Brief with the USPTO.

04/24/06 Applicants received a Notice of Non-Compliant Appeal Brief dated April 21, 2006 (Exhibit A).

20

05/19/06 Applicants filed a Corrected Appeal Brief with the USPTO.

08/25/06 Applicants received a Notice of Non-Compliant Appeal Brief dated August 23, 2006 in response to the Corrected Appeal Brief filed on May 19, 2006 (Exhibit B).

25

09/25/06 Applicants filed a Twice Corrected Appeal Brief with the USPTO.

10/18/06 Applicants received a Notice of Non-Compliant Appeal Brief dated October 16, 2006 in response to the Twice Corrected Appeal Brief filed on September 25, 2006 (Exhibit C).

30

11/16/06 Applicants filed a Three Times Corrected Appeal Brief with the USPTO.

01/22/07 Applicants received a Communication Re: Appeal dated January 17, 2007 indicating the Appeal in this application was dismissed (Exhibit D).

35

02/09/07 Applicant conducted telephone interview with Examiner. The Examiner indicated that the Three Times Corrected Appeal Brief did not overcome all the reasons for Non-Compliance because the length of the citations utilized in mapping each independent claim to the disclosure in the Summary of Claimed Subject Matter was unacceptably long. Applicants note, however, that 37 CFR 41.37 (c)(1)(v) does not provide any guidance nor make any requirements regarding the length of the citations, and note that the Examiner's comments in support of the Notice of Non-Compliance did not indicate that the length of the citations was inappropriate. Applicants made a good faith effort to respond to address the deficiencies identified in the cited Notification of Non-Compliant Appeal Brief. Applicants submitted therewith a Four Times Corrected Appeal Brief that was believed to address all of the stated deficiencies and be fully compliant with 37 CFR 41.37 (c)(1)(v).

02/21/07 Applicants filed a Petition for Withdrawal of Holding of Abandonment with the USPTO. The Petition included Applicants request that in the event, the dismissal was not withdrawn, the response be treated as a Petition for Revival of an Application for Patent Abandoned Unintentionally (Exhibit E).

04/16/07 Applicants received the Decision on Petition Under CFR 1.181 to Withdraw Holding of Abandonment dated April 12, 2007. The Decision stated the petition was Denied. The Decision also stated "[a]s per applicant's request, the instant petition has been forwarded to the Office of Petition to treat as a petition to revive under 37 CFR §1.137(b)."

05/14/07 -

03/11/08 Applicants conducted periodic status checks on PAIR to see if a decision was made on the Petition for Revival of an Application for Patent Abandoned Unintentionally. There was no indication of a decision posted on Pair.

03/14/08 My assistant, telephoned the USPTO to inquire about the status of the decision. She spoke with Vincent Tran who instructed her to re-submit the Petition for Withdrawal of Holding of Abandonment documents and title them "Petition to Revive".

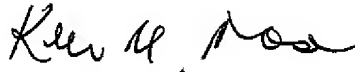
STATEMENT: The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.37(b) was unintentional.

5

The attention of the Examiner and the Appeal Board to this matter is appreciated.

Respectfully,

10



Date: May 2, 2008

15

Kevin M. Mason
Attorney for Applicant(s)
Reg. No. 36,597
Ryan, Mason & Lewis, LLP
1300 Post Road, Suite 205
Fairfield, CT 06824
(203) 255-6560



UNITED STATES PATENT AND TRADEMARK OFFICE

15W-210

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,741	02/19/2002	Thomas Yu-Kiu Kwok	YOR920010252US2	7574

7590 04/21/2006
Ryan, Mason & Lewis, LLP
Suite 205
1300 Post Road
Fairfield, CT 06430

RECEIVED

APR 24 2006

EXAMINER

ART UNIT PAPER NUMBER

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DOCKETED
RECEIVED: 4/24/06
DUE: 5/21/06
BY: [Signature]


Notification of Non-Compliant Appeal Brief (37 CFR 41.37)	Application No. 10/079,741	Applicant(s) KWOK ET AL	
	Examiner Sathyanarayan Pannala	Art Unit 2164	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The Appeal Brief filed on 16 February 2006 is defective for failure to comply with one or more provisions of 37 CFR 41.37.

To avoid dismissal of the appeal, applicant must file an amended brief or other appropriate correction (see MPEP 1205.03) within **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer. **EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136.**

1. ☐ The brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order.
2. ☐ The brief does not contain a statement of the status of all claims, (e.g., rejected, allowed, withdrawn, objected to, canceled), or does not identify the appealed claims (37 CFR 41.37(c)(1)(iii)).
3. ☐ At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 41.37(c)(1)(iv)).
4. ☒ (a) The brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters; and/or (b) the brief fails to: (1) identify, for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35 U.S.C. 112, sixth paragraph, and/or (2) set forth the structure, material, or acts described in the specification as corresponding to each claimed function with reference to the specification by page and line number, and to the drawings, if any, by reference characters (37 CFR 41.37(c)(1)(v)).
5. ☐ The brief does not contain a concise statement of each ground of rejection presented for review (37 CFR 41.37(c)(1)(vi)).
6. ☐ The brief does not present an argument under a separate heading for each ground of rejection on appeal (37 CFR 41.37(c)(1)(vii)).
7. ☐ The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 41.37(c)(1)(viii)).
8. ☐ The brief does not contain copies of the evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner **and relied upon by appellant in the appeal**, along with a statement setting forth where in the record that evidence was entered by the examiner, as an appendix thereto (37 CFR 41.37(c)(1)(ix)).
9. ☐ The brief does not contain copies of the decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences section of the brief as an appendix thereto (37 CFR 41.37(c)(1)(x)).
10. ☐ Other (including any explanation in support of the above items):


 Sathyanarayan Pannala
 Patent Examiner



UNITED STATES PATENT AND TRADEMARK OFFICE

Exhibit B
1500-010UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,741	02/19/2002	Thomas Yu-Kiu Kwok	YOR920010252US2	7574

7590 08/23/2006

Ryan, Mason & Lewis, LLP
Suite 205
1300 Post Road
Fairfield, CT 06430RECEIVED
AUG 25 2006

EXAMINER

ART UNIT

PAPER NUMBER

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DOCKETED

RECEIVED: 8/25/06
DUE: 9/23/06
BY: [Signature]

emailed 8/28/06


Notification of Non-Compliant Appeal Brief (37 CFR 41.37)	Application No. 10/079,741	Applicant(s) KWOK ET AL.	
	Examiner Sathyanarayan Pannala	Art Unit 2164	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The Appeal Brief filed on 22 May 2006 is defective for failure to comply with one or more provisions of 37 CFR 41.37.

To avoid dismissal of the appeal, applicant must file an amended brief or other appropriate correction (see MPEP 1205.03) within **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer.
EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136.

1. ☐ The brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order.
2. ☐ The brief does not contain a statement of the status of all claims, (e.g., rejected, allowed, withdrawn, objected to, canceled), or does not identify the appealed claims (37 CFR 41.37(c)(1)(iii)).
3. ☐ At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 41.37(c)(1)(iv)).
4. ☒ (a) The brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters; and/or (b) the brief fails to: (1) identify, for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35 U.S.C. 112, sixth paragraph, and/or (2) set forth the structure, material, or acts described in the specification as corresponding to each claimed function with reference to the specification by page and line number, and to the drawings, if any, by reference characters (37 CFR 41.37(c)(1)(v)).
5. ☐ The brief does not contain a concise statement of each ground of rejection presented for review (37 CFR 41.37(c)(1)(vi)).
6. ☐ The brief does not present an argument under a separate heading for each ground of rejection on appeal (37 CFR 41.37(c)(1)(vii)).
7. ☐ The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 41.37(c)(1)(viii)).
8. ☐ The brief does not contain copies of the evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner **and relied upon by appellant in the appeal**, along with a statement setting forth where in the record that evidence was entered by the examiner, as an appendix thereto (37 CFR 41.37(c)(1)(ix)).
9. ☐ The brief does not contain copies of the decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences section of the brief as an appendix thereto (37 CFR 41.37(c)(1)(x)).
10. ☐ Other (including any explanation in support of the above items):


 Sathyanarayan Pannala
 Patent Examiner



UNITED STATES PATENT AND TRADEMARK OFFICE

Exhibit C

15W-210

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/079,741	02/19/2002	Thomas Yu-Kiu Kwok	YOR920010252US2	7574

7590 10/16/2006

Ryan, Mason & Lewis, LLP
Suite 205
1300 Post Road
Fairfield, CT 06430

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OCT 18 2006

EXAMINER

ART UNIT

PAPER NUMBER

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DOCKETED

RECEIVED: 10/18/06

DUE: 11/16/06

BY: [Signature]

Corrected
Appeal Brief

Notification of Non-Compliant Appeal Brief (37 CFR 41.37)	Application No.	Applicant(s)	
	10/079,741	KWOK ET AL	
	Examiner	Art Unit	
	Sathyanarayan Pannala	2164	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

The Appeal Brief filed on 9/28/06 is defective for failure to comply with one or more provisions of 37 CFR 41.37.

To avoid dismissal of the appeal, applicant must file an amended brief or other appropriate correction (see MPEP 1205.03) within **ONE MONTH or THIRTY DAYS** from the mailing date of this Notification, whichever is longer. **EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136.**

- 1 ☐ The brief does not contain the items required under 37 CFR 41.37(c), or the items are not under the proper heading or in the proper order.
- 2 ☐ The brief does not contain a statement of the status of all claims, (e.g., rejected, allowed, withdrawn, objected to, canceled), or does not identify the appealed claims (37 CFR 41.37(c)(1)(iii)).
- 3 ☐ At least one amendment has been filed subsequent to the final rejection, and the brief does not contain a statement of the status of each such amendment (37 CFR 41.37(c)(1)(iv)).
- 4 ☒ (a) The brief does not contain a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number and to the drawings, if any, by reference characters; and/or (b) the brief fails to: (1) identify, for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function under 35 U.S.C. 112, sixth paragraph, and/or (2) set forth the structure, material, or acts described in the specification as corresponding to each claimed function with reference to the specification by page and line number, and to the drawings, if any, by reference characters (37 CFR 41.37(c)(1)(v)).
- 5 ☐ The brief does not contain a concise statement of each ground of rejection presented for review (37 CFR 41.37(c)(1)(vi)).
- 6 ☐ The brief does not present an argument under a separate heading for each ground of rejection on appeal (37 CFR 41.37(c)(1)(vii)).
- 7 ☐ The brief does not contain a correct copy of the appealed claims as an appendix thereto (37 CFR 41.37(c)(1)(viii)).
- 8 ☐ The brief does not contain copies of the evidence submitted under 37 CFR 1.130, 1.131, or 1.132 or of any other evidence entered by the examiner **and relied upon by appellant in the appeal**, along with a statement setting forth where in the record that evidence was entered by the examiner, as an appendix thereto (37 CFR 41.37(c)(1)(ix)).
- 9 ☐ The brief does not contain copies of the decisions rendered by a court or the Board in the proceeding identified in the Related Appeals and Interferences section of the brief as an appendix thereto (37 CFR 41.37(c)(1)(x)).
- 10 ☒ Other (including any explanation in support of the above items):

(4) IN SECTION V Summary of the Claimed Subject Matter: The brief does not identify each independent claim (1, 13, 16, 26, 34, 35, 36, and 37) and map them to the specification by page and line number, and to the drawing, if any, by reference characters.

/Everett R. Williams /
Everett R. Williams
Patent Appeals Specialist 571-272-3619



UNITED STATES PATENT AND TRADEMARK OFFICE

Exhibit D

1500-210

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
10/079 741	02/19/2002	Thomas Yu-Kiu Kwok	YOR920010252US2	7574

48062 7590 01/17/2007
RYAN, MASON & LEWIS, LLP
1300 POST ROAD
SUITE 205
FAIRFIELD, CT 06824

RECEIVED
JAN 22 2007

EXAMINER

PANNALA SATHYANARAYA R

ART UNIT	PAPER NUMBER
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2164

MAIL DATE	DELIVERY MODE
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01/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

DOCKETED
RECEIVED: 1/22/07
DUE: 1/29/07
BY: [Signature]

Call,
Examiner

Communication Re: Appeal

Application No.

10/079,741

Examiner

Sathyanarayan Pannala

Applicant(s)

KWOK ET AL.

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☐ The Notice of Appeal filed on _____ is not acceptable because:

- (a) ☐ it was not timely filed.
- (b) ☐ the statutory fee for filing the appeal was not submitted. See 37 CFR 41.20(b)(1).
- (c) ☐ the appeal fee received on _____ was not timely filed.
- (d) ☐ the submitted fee of \$_____ is insufficient. The appeal fee required by 37 CFR 41.20(b)(1) is \$_____.
- (e) ☐ the appeal is not in compliance with 37 CFR 41.31(a)(1) in that no claim has been twice rejected.
- (f) ☐ a Notice of Allowability, PTO-37, was mailed by the Office on _____.

2. ☐ The appeal brief filed on _____ is NOT acceptable for the reason(s) indicated below:

- (a) ☐ the brief and/or brief fee is untimely. See 37 CFR 41.37(a).
- (b) ☐ the statutory fee for filing the brief has not been submitted. See 37 CFR 41.20(b)(2).
- (c) ☐ the submitted brief fee of \$_____ is insufficient. The brief fee required by 37 CFR 41.20(b)(2) is \$_____.

The appeal in this application will be dismissed unless corrective action is taken to timely submit the brief and requisite fee. See 37 CFR 41.37(a)(1). Extensions of time may be obtained under 37 CFR 1.136(a). See 37 CFR 41.37(e).

3. ☒ The appeal in this application is DISMISSED because:

- (a) ☐ the statutory fee for filing the brief as required under 37 CFR 41.20(b)(2) was not timely submitted and the period for obtaining an extension of time to file the brief under 37 CFR 1.136(a) has expired.
- (b) ☐ the brief was not timely filed and the period for obtaining an extension of time to file the brief under 37 CFR 1.136(a) has expired.
- (c) ☐ a Request for Continued Examination (RCE) under 37 CFR 1.114 was filed on _____.
- (d) ☒ other: Failure to comply 37 CFR § 41.37(c). Because three times Non-Compliance Office Actions have been sent and no proper response with mapping each independent claim to disclosure specific page and line numbers and figure(s), if applicable mapping to elements of figure(s).

4. ☒ Because of the dismissal of the appeal, this application:

- (a) ☒ is abandoned because there are no allowed claims.
- (b) ☐ is before the examiner for final disposition because it contains allowed claims. Prosecution on the merits remains CLOSED.
- (c) ☐ is before the examiner for consideration.

C. Rones
CHARLES RONES
SUPERVISORY PATENT EXAMINER

S. Pannala
Primary Examiner
U.S. Patent and Trademark Office
PTOL-461 (Rev. 9-04)

Communication Re: Appeal

Part of Paper No. 20070111

Electronic Acknowledgement Receipt

EFS ID:	1532126
Application Number:	10079741
International Application Number:	
Confirmation Number:	7574
Title of Invention:	Retrieving handwritten documents using multiple document recognizers and techniques allowing both typed and handwritten queries
First Named Inventor/Applicant Name:	Thomas Yu-Kiu Kwok
Customer Number:	48062
Filer:	Kevin M. Mason
Filer Authorized By:	
Attorney Docket Number:	YOR920010252US2
Receipt Date:	21-FEB-2007
Filing Date:	19-FEB-2002
Time Stamp:	12:01:34
Application Type:	Utility

Payment information:

Submitted with Payment	no
------------------------	----

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)	Multi Part /.zip	Pages (if appl.)
1	Petition for review by the Office of Petitions	YOR920010252US2_Petfor WithdrawalHoldAban.pdf	266781	no	6

Warnings:

Information:					
2	Appeal Brief Filed	YOR920010252US2_Appeal Brief pdf	1133275	no	24
Warnings:					
Information:					
Total Files Size (in bytes):			1400056		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s): Kwok et al.
Docket No.: YOR920010252US2
Serial No.: 10/079,741
Filing Date: February 19, 2002
Group: 2164
Examiner: Sathyanaraya R. Pannala

Title: Retrieving Handwritten Documents Using Multiple Document Recognizers and
Techniques Allowing Both Typed and Handwritten Queries

TRANSMITTAL LETTER

Mail Stop Appeal Brief - Patents
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450


Sir:

Submitted herewith are the following documents relating to the above-identified patent application:

1. Petition for Withdrawal of Holding of Abandonment; and
2. Four Times Corrected Appeal Brief.

In the event of non-payment or improper payment of a required fee, the Commissioner is authorized to charge or to credit **IBM Corporation's Deposit Account No. 50-0510** as required to correct the error a duplicate copy of this letter is enclosed.

Respectfully,



Date: February 21, 2007

Kevin M. Mason
Attorney for Applicant(s)
Reg. No. 36,597
Ryan, Mason & Lewis, LLP
1300 Post Road, Suite 205
Fairfield, CT 06824
(203) 255-6560

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

5 Applicant(s): Kwok et al.
Docket No.: YOR920010252US2
Serial No.: 10/079,741
Filing Date: February 19, 2002
10 Group: 2164
Examiner: Sathyanaraya R. Pannala

Title: Retrieving Handwritten Documents Using Multiple Document
Recognizers and Techniques Allowing Both Typed and Handwritten
15 Queries

PETITION FOR WITHDRAWAL OF HOLDING OF ABANDONMENT

20 Mail Stop Appeal Brief - Patents
Commissioner for Patents
P O. Box 1450
Alexandria, VA 22313-1450

25 Sir:

1 The above-identified application became abandoned for failure to comply
with 37 CFR §41.37(c) because no proper response with a mapping of each independent
30 claim to the disclosure with specific page and line numbers and figures, if applicable, was
allegedly received in response to three Notifications of Non-Compliant Appeal Brief, as
indicated in the Communication Regarding Appeal, attached hereto as Exhibit A.

2 Applicants note that Rule 41.37(d) states that an appeal can be dismissed
35 if an appellant does not file an amended brief within the set time period, or files an
amended brief which does not overcome all the reasons for non-compliance stated in the
notification.

3. Applicants submit that each response to the Notification of Non-Compliant Appeal Brief, including the Three Times Corrected Appeal Brief submitted on November 16, 2006, was filed within the set time period.

4. Applicants submit that the Three Times Corrected Appeal Brief submitted on November 16, 2006 was in compliance with 37 CFR 41.37 (c)(1)(v) and addressed all of the Examiner's comments in support of the Notification of Non-Compliant Appeal Brief.

5. Applicants note that, in a telephone interview on Friday, February 9, 2007, the Examiner indicated that the Three Times Corrected Appeal Brief did not overcome all the reasons for Non-Compliance because the length of the citations utilized in mapping each independent claim to the disclosure in the Summary of Claimed Subject Matter was unacceptably long. Applicants note, however, that 37 CFR 41.37 (c)(1)(v) does not provide any guidance nor make any requirements regarding the length of the citations, and note that the Examiner's comments in support of the Notice of Non-Compliance did not indicate that the length of the citations was inappropriate. Applicants made a good faith effort to respond to address the deficiencies identified in the cited Notification of Non-Compliant Appeal Brief. Applicants submit herewith a Four Times Corrected Appeal Brief that is believed to address all of the stated deficiencies and to be fully compliant with 37 CFR 41.37 (c)(1)(v).

6. Applicants submit, therefore, that the dismissal of the Appeal was improper and respectfully request that the dismissal be withdrawn.

7. In the event, that the dismissal is not withdrawn, Applicants hereby request that this response be treated as a Petition for Revival of an Application for Patent Abandoned Unintentionally.

8. Applicants maintain that a petition fee should not be charged since Applicants submitted a timely response that overcame the reasons for Non-Compliance, and since a petition in accordance with 37 CFR 1.181(a) does not require a fee.

5 9. Petition Fee: In the event that a Petition Fee is due, please charge **Deposit Account No. 50-0510** the required fee to cover the petition fee due under 37 CFR 1.17(m). In the event of non-payment or improper payment of a required fee, the Commissioner is authorized to charge or to credit **Deposit Account No. 50-0510** as required to correct the error.

10 10. STATEMENT: The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.37(b) was unintentional.

15 Respectfully submitted,



Date: February 21, 2007

Kevin M. Mason
Attorney for Applicant(s)
Reg. No. 36,597
Ryan, Mason & Lewis, LLP
1300 Post Road, Suite 205
Fairfield, CT 06430
(203) 255-6560



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EXHIBIT A

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APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
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10/079 741

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Thomas Yu-Kiu Kwok

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RYAN, MASON & LEWIS, LLP
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SUITE 205
FAIRFIELD, CT 06824

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EXAMINER

PANNALA SATHYANARAYA R

ART UNIT	PAPER NUMBER
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2164

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01/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

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Examiner

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Communication Re: Appeal

Application No.

10/079,741

Examiner

Sathyanarayan Pannala

Applicant(s)

KWOK ET AL.

Art Unit

2164

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☐ The Notice of Appeal filed on _____ is not acceptable because:

(a) ☐ it was not timely filed.

(b) ☐ the statutory fee for filing the appeal was not submitted. See 37 CFR 41.20(b)(1).

(c) ☐ the appeal fee received on _____ was not timely filed.

(d) ☐ the submitted fee of \$_____ is insufficient. The appeal fee required by 37 CFR 41.20(b)(1) is \$_____.

(e) ☐ the appeal is not in compliance with 37 CFR 41.31(a)(1) in that no claim has been twice rejected

(f) ☐ a Notice of Allowability, PTO-37, was mailed by the Office on _____.

2. ☐ The appeal brief filed on _____ is NOT acceptable for the reason(s) indicated below:

(a) ☐ the brief and/or brief fee is untimely. See 37 CFR 41.37(a).

(b) ☐ the statutory fee for filing the brief has not been submitted. See 37 CFR 41.20(b)(2).

(c) ☐ the submitted brief fee of \$_____ is insufficient. The brief fee required by 37 CFR 41.20(b)(2) is \$_____.

The appeal in this application will be dismissed unless corrective action is taken to timely submit the brief and requisite fee. See 37 CFR 41.37(a)(1). Extensions of time may be obtained under 37 CFR 1.136(a). See 37 CFR 41.37(e).

3. ☒ The appeal in this application is DISMISSED because:

(a) ☐ the statutory fee for filing the brief as required under 37 CFR 41.20(b)(2) was not timely submitted and the period for obtaining an extension of time to file the brief under 37 CFR 1.136(a) has expired.

(b) ☐ the brief was not timely filed and the period for obtaining an extension of time to file the brief under 37 CFR 1.136(a) has expired.

(c) ☐ a Request for Continued Examination (RCE) under 37 CFR 1.114 was filed on _____.

(d) ☒ other: Failure to comply 37 CFR § 41.37(c). Because three times Non-Compliance Office Actions have been sent and no proper response with mapping each independent claim to disclosure specific page and line numbers and figure(s), if applicable mapping to elements of figure(s).

4. ☒ Because of the dismissal of the appeal, this application:

(a) ☒ is abandoned because there are no allowed claims.

(b) ☐ is before the examiner for final disposition because it contains allowed claims. Prosecution on the merits remains CLOSED.

(c) ☐ is before the examiner for consideration.

C. Rones

CHARLES RONES

SUPERVISORY PATENT EXAMINER

S. Pannala
Primary Examiner

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicant(s): Kwok et al.
Docket No.: YOR920010252US2
Serial No.: 10/079,741
Filing Date: February 19, 2002
Group: 2167
Examiner: Sathyanaraya R. Pannala

Title: Retrieving Handwritten Documents Using Multiple Document
Recognizers and Techniques Allowing Both Typed and Handwritten
Queries

FOUR TIMES CORRECTED APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appellants hereby submit this Four Times Corrected Appeal Brief to conform to the current format requirements. The original Appeal Brief was submitted on February 14, 2006 to appeal the final rejection dated September 14, 2005, of claims 1-37 of the above-identified patent application.

REAL PARTY IN INTEREST

The present application is assigned to International Business Machines Corporation, as evidenced by an assignment recorded on February 19, 2002 in the United States Patent and Trademark Office at Reel 012614, Frame 0448. The assignee, International Business Machines Corporation, is the real party in interest.

RELATED APPEALS AND INTERFERENCES

There are no related appeals and interferences.

STATUS OF CLAIMS

The Examiner has indicated that claims 1-8, 11-23, and 25-37 are pending in the above-identified patent application, and indicated that claims 9-10 and 24 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. Appellants therefore believe that claims 1-37 are pending. Claims 26-33, 35, and 36 remain rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Claims 1-7, 12, 16, 19-22, 34, and 36 remain rejected under 35 U.S.C. §103(a) as being unpatentable over Tran (United States Patent Number 6,202,060), and further in view of Piersol (United States Patent Number 6,775,665), claims 8, 11, 13-15, 17-18, 23, and 25 remain rejected under 35 U.S.C. §103(a) as being unpatentable over Tran, in view of Piersol and in view of Keith (United States Patent Number 6,629,097), and claims 26-33, 35, and 37 remain rejected under 35 U.S.C. §103(a) as being unpatentable over Tran, and in view of Platt et al. (United States Patent Number 5,812,698). Claims 1, 6, 7, 13, 16, 21, 22, and 26-37 are being appealed.

STATUS OF AMENDMENTS

There have been no amendments filed subsequent to the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is directed to techniques that allow both text (FIG. 2: 272, 273) and handwritten queries (FIG. 2: 270, 271), and the queries can be single-word or multiword. Generally, each handwritten word in a handwritten document (FIG. 2: 211) is converted to a document stack (FIG. 6: 680) of words, where each document stack (FIG. 6: 680) contains a list of text words and a word score of some type for each text word in the list. The query is also converted to one or more stacks of words. (FIG. 1: 120; page 7, lines 6-13.) A measure is determined from each query and document stack. (FIG. 1: 130; page 9, lines 4-16; page 10, lines 8-14; page 16, line 21, to page 17, line 13.) Documents that meet search criteria in the query are then selected based on the query and the values of the measures. (Page 18, lines 14-23; page 19, lines 14-19.) The

present invention also performs multiple recognitions, with multiple recognizers, on a handwritten document to create multiple recognized transcriptions of the document. The multiple transcriptions are used for document retrieval. (Page 29, lines 1-26.) In another embodiment, a single transcription is created from the multiple transcriptions, and the single transcription is used for document retrieval.

Independent claim 1 is directed to a computer-implemented method, comprising the steps of: creating a document stack from at least one word in a handwritten document (page 6, lines 5-16; page 7, line 6, to page 8, line 3); creating a query stack from a query (FIG. 1: 120; page 7, lines 6-13); and determining a measure between the document stack and the query stack (FIG. 1: 130; page 10, lines 8-14; page 16, line 21, to page 17, line 13).

Independent claim 13 is directed to a computer-implemented method, comprising the steps of: for each of a plurality of documents, performing the following steps: creating a document stack from at least one word in a text document (page 6, lines 5-16; page 7, line 6, to page 8, line 3); creating a query stack from a query (FIG. 1: 120; page 7, lines 6-13); determining a measure between the document stack and the query stack (FIG. 1: 130; page 10, lines 8-14; page 16, line 21, to page 17, line 13); and scoring the documents based on the measure, thereby creating a document score (FIG. 1: 140; page 10, line 21, to page 11, line 10; page 14, lines 15-22); and displaying each document whose document score meets a predetermined threshold (FIG. 1: 160; page 18, lines 14-23)

Independent claim 16 is directed to a computer-implemented method for retrieving a subset of handwritten documents from a set of handwritten documents, each of the handwritten documents having a plurality of document stacks associated therewith, the method comprising the steps of: a) creating at least one query stack from a query comprising one or more words, wherein each word is handwritten or typed (FIG. 1: 120; page 7, lines 6-13); b) selecting a handwritten document from the set of handwritten documents; c) selecting a document stack from the selected handwritten document; d)

determining a measure between the at least one query stack and the selected document stack (FIG. 1: 130; page 10, lines 8-14; page 16, line 21, to page 17, line 13); e) performing steps (c) and (d) for at least one document stack associated with the selected handwritten document (page 10, lines 8-14; page 16, line 21, to page 17, line 13); f) performing steps (b), (c), and (d) for each handwritten document of the set of handwritten documents (page 10, lines 8-14; page 16, line 21, to page 17, line 13); g) scoring each of the handwritten documents in the set of handwritten documents by using the query and the measures, thereby creating a number of document scores (FIG. 1: 140; page 10, line 21, to page 11, line 10; page 14, lines 15-22); and h) selecting the subset of handwritten documents for display by using the document scores (FIG. 1: 160; page 18, lines 14-23; page 19, lines 14-19).

Independent claim 26 is directed to a computer-implemented method, comprising the steps of: creating a first word recognition stack, by using a first handwriting recognizer, from at least one word (page 25, line 26, to page 26, line 18); creating a second word recognition stack, by using a second handwriting recognizer, from the at least one word (page 25, line 26, to page 26, line 18); and comparing the first and second word recognition stacks with a third word recognition stack to determine whether a handwritten document should be retrieved (page 25, line 26, to page 26, line 18).

Independent claim 34 is directed to a computer system, comprising: a memory (FIG. 7: 730) that stores computer-readable code; and a processor (FIG. 7: 720) operatively coupled to the memory (FIG. 7: 730), the processor (FIG. 7: 720) configured to implement the computer-readable code, the computer-readable code configured to: create a document stack from at least one word in a handwritten document (page 7, line 6, to page 8, line 3); create a query stack from a query (FIG. 1: 120; page 7, lines 6-13); and determine a measure between the document stack and the query stack (FIG. 1: 130; page 10, lines 8-14; page 16, line 21, to page 17, line 13).

Independent claim 35 is directed to a computer system, comprising: a memory (FIG. 7: 730) that stores computer-readable code; and a processor (FIG. 7: 720) operatively coupled to the memory (FIG. 7: 730), the processor (FIG. 7: 720) configured

to implement the computer-readable code, the computer-readable code configured to:
create a first word recognition stack, by using a first handwriting recognizer, from at least
one word (page 25, line 26, to page 26, line 18); create a second word recognition stack,
by using a second handwriting recognizer, from the at least one word (page 25, line 26, to
5 page 26, line 18); and compare the first and second word recognition stacks with a third
word recognition stack to determine whether a handwritten document should be retrieved
(page 25, line 26, to page 26, line 18).

Independent claim 36 is directed to an article of manufacture, comprising:
a computer readable medium having computer-readable code means embodied thereon,
10 the computer-readable program code means comprising: a step to create a document stack
from at least one word in a handwritten document (page 7, line 6, to page 8, line 3); a step
to create a query stack from a query (FIG. 1: 120; page 7, lines 6-13); and a step to
determine a measure between the document stack and the query stack (FIG. 1: 130; page
10, lines 8-14; page 16, line 21, to page 17, line 13).

15 Independent claim 37 is directed to an article of manufacture, comprising:
a computer readable medium having computer-readable code means embodied thereon,
the computer-readable program code means comprising: a step to create a first word
recognition stack, by using a first handwriting recognizer, from at least one word (page
25, line 26, to page 26, line 18); a step to create a second word recognition stack, by
20 using a second handwriting recognizer, from the at least one word (page 25, line 26, to
page 26, line 18); and a step to compare the first and second word recognition stacks with
a third word recognition stack to determine whether a handwritten document should be
retrieved (page 25, line 26, to page 26, line 18).

In another embodiment, the query is typewritten, and the step of creating a
25 query stack comprises creating a query stack for each query word of the query (FIG. 1:
120; page 7, lines 6-13), wherein each query stack comprises a corresponding word from
the query and an associated high word score for this word, and wherein each query stack
comprises a plurality of other words having zero word scores associated therewith (page
12, lines 13- 20; page 22, line 25, to page 23, line 5).

30

In another embodiment, the query is typewritten, and the step of creating a query stack comprises creating a query stack for each query word of the query (FIG. 1: 120; page 7, lines 6-13), wherein each query stack comprises a corresponding word from the query and an associated high word score for this word, and wherein each query stack comprises
5 at least one other word having a small word score associated therewith (page 8, lines 5-14).

In another embodiment, at least one of the words of the query is typewritten, and step (a) further comprises the step of creating a query stack for each of the at least one words of the query (FIG. 1: 120; page 7, lines 6-13), wherein each query
10 stack comprises a corresponding word from the query and an associated high word score for this word, and wherein each query stack comprises a plurality of other words having zero word scores associated therewith (page 12, lines 13-20; page 22, line 25, to page 23, line 5)

In another embodiment, at least one of the words of the query is typewritten, and step (a) further comprises the step of creating a query stack for each of the at least one words of the query (FIG. 1: 120; page 7, lines 6-13), wherein each query
15 stack comprises a corresponding word from the query and an associated high word score for this word, and wherein each query stack comprises at least one other word having a small word score associated therewith (page 12, lines 13-20; page 22, line 25, to page 23, line 5).
20

STATEMENT OF GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 26-33, 35, and 36 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Claims 1-7, 12, 16, 19-
25 22, 34, and 36 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tran, and further in view of Piersol, claims 8, 11, 13-15, 17-18, 23, and 25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tran, in view of Piersol and in view of Keith, and claims 26-33, 35, and 37 are rejected under 35 U.S.C. §103(a) as being unpatentable over Tran, and in view of Platt et al.

30

ARGUMENT

Section 112 Rejections

5 Claims 26-33, 35, and 36 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. In particular, the Examiner asserts that the specification on page 29, lines 2-27, does not support the first word stack, second word stack, and third word stack as well as first handwriting recognizer and second handwriting recognizer. In the Response to Arguments section of
10 the final Office Action, the Examiner asserts that the specification amendment is rejected because the specification amendment is done to incorporate the rejected claim in order to overcome the rejection (see, MPEP 601.01).

 Appellants note that the specification has been amended to recite that

15 a first word stack can be created from at least one word by using a first handwriting recognizer, and a second word stack can be created from at least one word by using a second handwriting recognizer. A determination of whether a document should be retrieved can then be made by comparing the first and second word stacks with a third word stack.

20

Support for this amendment can be found in originally filed claim 26. No new matter is introduced.

 Regarding the rejection of the specification amendment because the specification amendment is done to incorporate the rejected claim in order to overcome
25 the rejection, Appellants note that the claims are considered a part of the invention disclosure and therefore do not constitute new matter.

Independent Claims 1, 13, 16, 26 and 34-37

 Independent claims 1, 16, 34, and 36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tran, and further in view of Piersol, independent
30 claim 13 was rejected under 35 U.S.C. §103(a) as being unpatentable over Tran, in view of Piersol and in view of Keith, and independent claims 26, 35, and 37 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tran, and in view of Platt et al.

Regarding claims 1, 34, and 36, the Examiner asserts that Tran teaches “creating a document stack from at least one word in a handwritten document” (FIG. 22, col. 31, line 66, to col. 32, line 16), and “creating a query stack from a query” (FIG. 1; col. 10, line 16). The Examiner acknowledges that Tran does not explicitly teach
 5 determining the measure between document and query stacks, but asserts that Piersol teaches this limitation (FIGS. 8 and 9A; col. 13, lines 20-31 and 54-59). Regarding claims 26, 35, and 37, the Examiner asserts that Tran teaches creating a first word recognition stack by using a first handwriting recognizer from at least one word, creating
 10 a second word recognition stack by using a second handwriting recognizer from at least one word, and comparing the first and second word recognition stacks with a third word recognition stack to determine whether a handwritten document should be retrieved (FIG. 22; col. 31, line 66, to col. 32, line 16).

Appellants note that the present disclosure teaches that,

15 in step 120, the query is converted to one or more query stacks. A query stack is a recognition stack having a number of words and, for each word, a word score. Basically, a recognition stack represents the text words, which a handwriting recognition engine determines from an ink word, that are the most likely set of possible text words corresponding to the ink word. In general, a recognition stack contains all possible words
 20 known to a handwritten recognition system. In practice, the recognition stacks are subjected to a word score threshold or a rank threshold, which essentially truncates the recognition stacks
 (Page 7, lines 6-13)

Appellants also note that the present disclosure teaches that

25 the term “document stack” will be used for a recognition stack determined from a document. Again, a document stack is an N-best list as described above. It should be noted that, in general, there will be multiple recognition stacks per query or per document.
 (Page 7, line 27, to page 8, line 3)

30 Thus, query stacks and document stacks are recognition stacks that represent the text words which a handwriting recognition engine determines from an ink word, that are the most likely set of possible text words corresponding to the ink word. In general, a recognition stack contains all possible words known to a handwritten recognition system. Thus, at least one of the recognized words is represented by more than one word in the
 35 stack. Tran does *not* disclose or suggest that a *stack contains more than one word*

corresponding to one of the recognized words, and does *not* disclose or suggest that stacks represent the text words which a handwriting recognition engine determines from an ink word, that are the most likely set of possible text words corresponding to the ink word. In addition, Piersol does not disclose or suggest determining a measure between

5 document and query stacks, as defined in the present invention. Independent claims 1, 13, 34, and 36 require creating a document stack from at least one word in a handwritten or text document; creating a query stack from a query; and determining a measure between the document stack and the query stack. Independent claim 16 requires creating at least one query stack from a query comprising one or more words, wherein each word

10 is handwritten or typed; selecting a handwritten document from the set of handwritten documents; selecting a document stack from the selected handwritten document; and determining a measure between the at least one query stack and the selected document stack. Independent claims 26, 35, and 37 require creating a first word recognition stack, by using a first handwriting recognizer, from at least one word; creating a second word

15 recognition stack, by using a second handwriting recognizer, from the at least one word; and comparing the first and second word recognition stacks with a third word recognition stack to determine whether a handwritten document should be retrieved.

Thus, Tran and Piersol, alone or in combination, do not disclose or suggest creating a document stack from at least one word in a handwritten or text document;

20 creating a query stack from a query; and determining a measure between the document stack and the query stack, as required by independent claims 1, 13, 34, and 36, do not disclose or suggest creating at least one query stack from a query comprising one or more words, wherein each word is handwritten or typed; selecting a handwritten document from the set of handwritten documents; selecting a document stack from the selected

25 handwritten document; and determining a measure between the at least one query stack and the selected document stack, as required by independent claim 16, and do not disclose or suggest creating a first word recognition stack, by using a first handwriting recognizer, from at least one word; creating a second word recognition stack, by using a second handwriting recognizer, from the at least one word; and comparing the first and

30 second word recognition stacks with a third word recognition stack to determine whether

a handwritten document should be retrieved, as required by independent claims 26, 35, and 37.

Additional Cited References

Keith was also cited by the Examiner for its disclosure that “each of the
5 query and document stacks comprises a plurality of words, wherein the measure uses edit distances to compare words in the query stack to words in the document stack” (col. 20, lines 20-26). Appellants note that Keith is directed to a system for discerning and displaying relational structure and conceptual similarities among items in a target group of data items (see, Abstract). Keith does not disclose or suggest query stacks or
10 document stacks, as defined in the present disclosure, and does not disclose or suggest that a stack contains more than one word corresponding to one of the recognized words. In addition, Keith does not disclose or suggest determining the measure between document and query stacks, as defined in the present invention.

Thus, Keith does not disclose or suggest creating a document stack from
15 at least one word in a handwritten or text document; creating a query stack from a query; and determining a measure between the document stack and the query stack, as required by independent claims 1, 13, 34, and 36, does not disclose or suggest creating at least one query stack from a query comprising one or more words, wherein each word is handwritten or typed; selecting a handwritten document from the set of handwritten
20 documents; selecting a document stack from the selected handwritten document; and determining a measure between the at least one query stack and the selected document stack, as required by independent claim 16, and does not disclose or suggest creating a first word recognition stack, by using a first handwriting recognizer, from at least one word; creating a second word recognition stack, by using a second handwriting
25 recognizer, from the at least one word; and comparing the first and second word recognition stacks with a third word recognition stack to determine whether a handwritten document should be retrieved, as required by independent claims 26, 35, and 37.

Platt et al. was also cited by the Examiner for its disclosure of a
“handwriting recognizing system using the input device as tablet on which characters are
30 formed using a pen-like stylus” (FIG. 1; col. 3, line 66, to col. 4, line 3). Appellants note

that Platt is directed to a system for recognizing handwritten characters; including pre-processing apparatus for generating a set of features for each handwritten character, a neural network disposed for operating on sparse data structures of those features and generating a set of confidence values for each possible character symbol which might correspond to the handwritten character, and post-processing apparatus for adjusting those confidence values and for selecting a character symbol consistent with external knowledge about handwritten characters and the language they are written in. (See, abstract.) Platt does not disclose or suggest query stacks or document stacks, as defined in the present disclosure, and does not disclose or suggest that a stack contains more than one word corresponding to one of the recognized words. In addition, Platt does not disclose or suggest determining the measure between document and query stacks, as defined in the present invention.

Thus, Platt et al. do not disclose or suggest creating a document stack from at least one word in a handwritten or text document; creating a query stack from a query; and determining a measure between the document stack and the query stack, as required by independent claims 1, 13, 34, and 36, do not disclose or suggest creating at least one query stack from a query comprising one or more words, wherein each word is handwritten or typed; selecting a handwritten document from the set of handwritten documents; selecting a document stack from the selected handwritten document; and determining a measure between the at least one query stack and the selected document stack, as required by independent claim 16, and do not disclose or suggest creating a first word recognition stack, by using a first handwriting recognizer, from at least one word; creating a second word recognition stack, by using a second handwriting recognizer, from the at least one word; and comparing the first and second word recognition stacks with a third word recognition stack to determine whether a handwritten document should be retrieved, as required by independent claims 26, 35, and 37.

Claims 6 and 21

Regarding claims 6 and 21, the Examiner notes that Pietsol teaches that, if a (saved) query is added to the stack, an HTML page representing *the query is appended to the stack*. Claims 6 and 21 require wherein the query is typewritten, and wherein the

step of creating a query stack comprises *creating a query stack for each query word of the query, wherein each query stack comprises a corresponding word from the query and an associated high word score for this word, and wherein each query stack comprises a plurality of other words having zero word scores associated therewith.*

5 Appellants could find no disclosure or suggestion by Piersol of these limitations.

Claims 7 and 22

Regarding claims 7 and 22, the Examiner notes that Piersol teaches that,

10 referring to FIG. 9A, a listing of documents satisfying a query of "relative sentences" is shown. Within the list view, query results may be sorted by a variety of criteria such as, for example, creation source (the device that created or captured the document), creation time, file size, and search result score, all indicated by reference number 902. (Col. 13, lines 54-59.)

15 Claims 7 and 22 require wherein the query is typewritten, and wherein the step of creating a query stack comprises creating a query stack *for each query word of the query, wherein each query stack comprises a corresponding word from the query and an associated high word score for this word, and wherein each query stack comprises at least one other word having a small word score associated therewith*. Appellants could find no disclosure or suggestion by Piersol of these limitations.

20

Conclusion

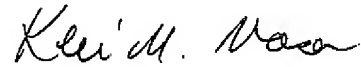
The rejections of the cited claims under section 103 in view of Tian, Piersol, Keith, and Platt et al., alone or in any combination, are therefore believed to be improper and should be withdrawn. The remaining rejected dependent claims are
25 believed allowable for at least the reasons identified above with respect to the independent claims.

The attention of the Examiner and the Appeal Board to this matter is appreciated.

Respectfully,

5

Date: February 21, 2007



Kevin M. Mason

Attorney for Applicant(s)

Reg. No. 36,597

10

Ryan, Mason & Lewis, LLP

1300 Post Road, Suite 205

Fairfield, CT 06430

(203) 255-6560

CLAIMS APPENDIX

1. A computer-implemented method comprising the steps of:
 - 5 creating a document stack from at least one word in a handwritten document;
 - creating a query stack from a query; and
 - determining a measure between the document stack and the query stack.
- 10 2. The method of claim 1, wherein:
 - the at least one word comprises a plurality of words;
 - the document stack corresponds to one of the plurality of words in the handwritten document;
 - the query comprises a plurality of query words and at least one operator;
 - 15 the query stack corresponds to one of the plurality of query words; and
 - the step of determining a measure further comprises the step of, for each query stack, determining a measure between the query stack and each document stack in the handwritten document.
- 20 3. The method of claim 2, wherein each document stack comprises a plurality of document scores, and wherein the method further comprises the step of optimizing each of the document scores for the document stacks.
4. The method of claim 1, wherein the measure quantifies an amount of
25 similarity between the document stack and the query stack.
5. The method of claim 1, wherein the query is handwritten, typewritten, or partially handwritten and partially typewritten.
- 30 6. The method of claim 5, wherein the query is typewritten, and wherein the step of creating a query stack comprises creating a query stack for each query word of the

query, wherein each query stack comprises a corresponding word from the query and an associated high word score for this word, and wherein each query stack comprises a plurality of other words having zero word scores associated therewith.

- 5 7. The method of claim 5, wherein the query is typewritten, and wherein the step of creating a query stack comprises creating a query stack for each query word of the query, wherein each query stack comprises a corresponding word from the query and an associated high word score for this word, and wherein each query stack comprises at least one other word having a small word score associated therewith.

10

8. The method of claim 1, wherein the measure is selected from the group consisting of a dot product measure, an Okapi measure, a score-based keyword measure, a rank-based keyword measure, a measure using n-grams, and a measure using edit distances.

15

9. The method of claim 1, where each query stack and document stack comprises a plurality of scores, wherein the measure is a dot product measure defined as follows

$$\cos(\vec{q}, \vec{d}) = \frac{\vec{q} \cdot \vec{d}}{\sqrt{(\vec{q} \cdot \vec{q})(\vec{d} \cdot \vec{d})}},$$

- 20 where \vec{q} is a vector comprising scores from the query stack, and wherein \vec{d} is a vector comprising scores from the document stack.

10. The method of claim 1, wherein each stack is not constrained to words in a vocabulary, wherein each of the words in a query stack or document stack are comprised of a number of n-grams, wherein probabilities are determined for each n-gram of the query stack and document stack, and wherein the probabilities of the n-grams are used in the measure.
- 25

11 The method of claim 1, wherein each of the query and document stacks
comprises a plurality of words, wherein the measure uses edit distances to compare words
in the query stack to words in the document stack.

5 12. The method of claim 1, further comprising the step of determining a
document score for the handwritten document by using the measure.

13. A computer-implemented method comprising the steps of:
for each of a plurality of documents, performing the following steps:

10 creating a document stack from at least one word in a text document;
 creating a query stack from a query;
 determining a measure between the document stack and the query stack;
and
 scoring the documents based on the measure, thereby creating a document
15 score; and
 displaying each document whose document score meets a predetermined
threshold.

14. The method of claim 13, wherein the query is a handwritten query.

20

15. The method of claim 13, wherein the query is a typewritten query.

16 A computer-implemented method for retrieving a subset of handwritten
documents from a set of handwritten documents, each of the handwritten documents
25 having a plurality of document stacks associated therewith, the method comprising the
steps of:

 a) creating at least one query stack from a query comprising one or
more words, wherein each word is handwritten or typed;

 b) selecting a handwritten document from the set of handwritten

documents;

c) selecting a document stack from the selected handwritten document;

5 d) determining a measure between the at least one query stack and the selected document stack;

e) performing steps (c) and (d) for at least one document stack associated with the selected handwritten document;

f) performing steps (b), (c), and (d) for each handwritten document of the set of handwritten documents;

10 g) scoring each of the handwritten documents in the set of handwritten documents by using the query and the measures, thereby creating a number of document scores; and

h) selecting the subset of handwritten documents for display by using the document scores.

15

17. The method of claim 16, wherein step (h) further comprises the step of selecting handwritten documents that are above a predetermined threshold.

18. The method of claim 17, wherein the predetermined threshold is selected
20 from the group consisting of a rank threshold and a score threshold.

19 The method of claim 16, wherein each document stack comprises a plurality of word scores, and wherein the method further comprises the step of:

25 i) optimizing each of the word scores for the document stacks.

20. The method of claim 16, wherein the measure quantifies similarity between the document stack and the query stack.

21 The method of claim 16, wherein at least one of the words of the query is
30 typewritten, and wherein step (a) further comprises the step of creating a query stack for

each of the at least one words of the query, wherein each query stack comprises a corresponding word from the query and an associated high word score for this word, and wherein each query stack comprises a plurality of other words having zero word scores associated therewith.

5

22. The method of claim 16, wherein at least one of the words of the query is typewritten, and wherein step (a) further comprises the step of creating a query stack for each of the at least one words of the query, wherein each query stack comprises a corresponding word from the query and an associated high word score for this word, and
10 wherein each query stack comprises at least one other word having a small word score associated therewith.

23. The method of claim 16, wherein the measure is selected from the group consisting of a dot product measure, an Okapi measure, a score-based keyword measure,
15 a rank-based keyword measure, a measure using n-grams, and a measure using edit distances.

24. The method of claim 16, wherein each stack is not constrained to words in a vocabulary, wherein each of the words in a query stack or document stack are
20 comprised of a number of n-grams, wherein probabilities are determined for each n-gram of the query stack and document stack, and wherein the probabilities of the n-grams are used in the measure.

25. The method of claim 16, wherein each of the query and document stacks comprises a plurality of words, wherein the measure uses edit distances to compare words
25 in the query stack to words in the document stack.

26. A computer-implemented method comprising the steps of:
creating a first word recognition stack, by using a first handwriting
30 recognizer, from at least one word;

creating a second word recognition stack, by using a second handwriting recognizer, from the at least one word; and

comparing the first and second word recognition stacks with a third word recognition stack to determine whether a handwritten document should be retrieved.

5

27. The method of claim 26, wherein:

the at least one word is at least one handwritten word from the handwritten document;

the first word recognition stack comprises a first document stack;

10 the second word recognition stack comprises a second document stack;

and

the third word recognition stack is a query stack determined from at least one query word

15 28. The method of claim 26, wherein:

the at least one word is at least one word from a query;

the first word recognition stack comprises a first query stack;

the second word recognition stack comprises a second query stack; and

20 the third word recognition stack is a document stack determined from at least one handwritten word in the handwritten document.

29. The method of claim 26, further comprising the steps of:

configuring a handwriting recognizer into a first configuration to create the first handwriting recognizer; and

25 configuring the handwriting recognizer into a second configuration to create the second handwriting recognizer, wherein the first and second configuration are different.

30 The method of claim 29, wherein the first configuration comprises a configuration caused by selecting a constraint from the group consisting essentially of an

uppercase letter constraint, a lowercase letter constraint, a recognize digits constraint, a language constraint, a constraint wherein characters and words are recognized only if in a vocabulary, and a constraint wherein characters and words are hypothesized when not in a vocabulary, and wherein the second configuration comprises a configuration caused by
5 selecting a constraint from the group consisting essentially of an uppercase letter constraint, a lowercase letter constraint, a recognize digits constraint, a language constraint, a constraint wherein characters and words are recognized only if in a vocabulary, and a constraint wherein characters and words are hypothesized when not in a vocabulary.

10

31. The method of claim 26, wherein the step of comparing further comprises the step of merging the first and second word recognition stacks to create a fourth word recognition stack that is compared with the third word recognition stack.

15

32. The method of claim 26, wherein the first handwriting recognizer has a first configuration, wherein the second handwriting recognizer has a second configuration, and wherein the first and second configurations are different.

20

33. The method of claim 32, wherein the first configuration comprises a configuration caused by selecting a constraint from the group consisting essentially of an uppercase letter constraint, a lowercase letter constraint, a recognize digits constraint, a language constraint, a constraint wherein characters and words are recognized only if in a vocabulary, and a constraint wherein characters and words are hypothesized when not in a vocabulary, and wherein the second configuration comprises a configuration caused by
25 selecting a constraint from the group consisting essentially of an uppercase letter constraint, a lowercase letter constraint, a recognize digits constraint, a language constraint, a constraint wherein characters and words are recognized only if in a vocabulary, and a constraint wherein characters and words are hypothesized when not in a vocabulary.

30

34. A computer system comprising:
a memory that stores computer-readable code; and
a processor operatively coupled to the memory, the processor configured
to implement the computer-readable code, the computer-readable code configured to:

5 create a document stack from at least one word in a handwritten
document;
create a query stack from a query; and
determine a measure between the document stack and the query stack.

10 35. A computer system comprising:
a memory that stores computer-readable code; and
a processor operatively coupled to the memory, the processor configured
to implement the computer-readable code, the computer-readable code configured to:

15 create a first word recognition stack, by using a first handwriting
recognizer, from at least one word;
create a second word recognition stack, by using a second handwriting
recognizer, from the at least one word; and
compare the first and second word recognition stacks with a third word
recognition stack to determine whether a handwritten document should be retrieved.

20

36. An article of manufacture comprising:
a computer readable medium having computer-readable code means
embodied thereon, the computer-readable program code means comprising:

25 a step to create a document stack from at least one word in a handwritten
document;
a step to create a query stack from a query; and
a step to determine a measure between the document stack and the query
stack.

30

37. An article of manufacture comprising:

a computer readable medium having computer-readable code means embodied thereon, the computer-readable program code means comprising:

5 a step to create a first word recognition stack, by using a first handwriting recognizer, from at least one word;

a step to create a second word recognition stack, by using a second handwriting recognizer, from the at least one word; and

a step to compare the first and second word recognition stacks with a third word recognition stack to determine whether a handwritten document should be retrieved.

EVIDENCE APPENDIX

There is no evidence submitted pursuant to § 1.130, 1.131, or 1.132 or entered by the Examiner and relied upon by appellant

RELATED PROCEEDINGS APPENDIX

There are no known decisions rendered by a court or the Board in any proceeding identified pursuant to paragraph (c)(1)(ii) of 37 CFR 41.37.